

What is claimed is:

1. A method for providing an expected arrival time of bus stops for a traffic information system, wherein the traffic information system includes an on-board device, a  
5 plurality of roadside base stations and a bus information server, the method comprising the steps of:

a) collecting traffic information including a on-board device ID, a roadside base station ID and a pass time  
10 from the roadside base station;

b) computing an average traffic speed of each section based on the collected traffic information and computing time required for arriving to each bus stop from a roadside base station based on the computed average traffic speed of  
15 each section; and

c) at the bus information server, transmitting the computed time required for arriving to each bus stop from the roadside base station in order to expected arrival time of each bus station and time required for arriving at each  
20 bus stop through a display device to passengers of a bus by using the roadside base station and on-board device.

2. The method as recited in claim 1, wherein the step b) includes the steps of:

25 b-1) at the bus information server, computing traffic speed information between roadside base stations based on an on-board device ID, an roadside base station ID and the

pass time received from the roadside base station and storing the computed traffic speed information to a section speed\_DB; and

b-2) at the bus information server, reading a bus stop\_DB stored in the bus information server as a form of a table containing bus stop list according to bus courses passing the roadside base station, computing a time required for arriving at each bus stop based on the table of the bus stop\_DB and storing the computed time for arriving at each bus stop in a requirement time\_DB as a form of a table.

3. The method as recited in claim 2, wherein in the step b-1), the bus information server transmits the table of the requirement time\_DB and an on-board device group ID to the corresponding roadside base station.

4. The method as recited in the claim 3, wherein the bus information server, the roadside base station and the on-board device determine a bus course based on the on-board device group ID.

5. The method as recited in the claim 3, wherein the bus stop is a major bus stop.

6. A method for providing an expected arrival time of bus stops for a traffic information system, wherein the

traffic information system includes an on-board device, a plurality of roadside base stations and a bus information server, the method comprising the steps of:

a) at the on-board device, transmitting on-board  
5 device ID to a roadside base station through a dedicated short range communication protocol;

b) at the on-board device, receiving an arrival time of each bus stop stored in the roadside base station according to the on-board ID, wherein the arrival time of  
10 each bus stop is computed at the bus information server according to the on-board group ID; and

c) announcing the arrival time of each bus stop through an output device of the on-board device.

15 7. The method as recited in the claim 6, wherein the bus information server, the roadside base station and the on-board device determine a bus course based on an on-board device group ID.

20 8. The method as recited in the claim 6, wherein the bus stop is a major bus stop.

9. A computer readable recoding medium for storing a program for executing a method for providing an expected  
25 arrival time of bus stops for a traffic information system, wherein the traffic information system includes an on-board device, a plurality of roadside base stations and a bus

information server, the method comprising the steps of:

a) collecting traffic information including a on-board device ID, a roadside base station ID and a pass time from the roadside base station;

5        b) computing an average traffic speed of each section based on the collected traffic information and computing time required for arriving to each bus stop from a roadside base station based on the computed average traffic speed of each section; and

10       c) at the bus information server, transmitting the computed time required for arriving to each bus stop from the roadside base station in order to expected arrival time of each bus station and time required for arriving at each bus stop through a display device to passengers of a bus by  
15       using the roadside base station and on-board device.

10. A computer readable recoding medium for storing a program for executing a method for providing an expected arrival time of bus stops for a traffic information system,  
20       wherein the traffic information system includes an on-board device, a plurality of roadside base stations and a bus information server, the method comprising the steps of:

a) at the on-board device, transmitting on-board device ID to a roadside base station through a dedicated  
25       short range communication protocol;

b) at the on-board device, receiving an arrival time of each bus stop stored in the roadside base station

according to the on-board ID, wherein the arrival time of each bus stop is computed at the bus information server according to the on-board group ID; and

c) announcing the arrival time of each bus stop  
5 through an output device of the on-board device.